Jan. 5, 1926. 1,568,625

D. P. ROBINSON

FRICTION TOP CAN

Filed April 26, 1921

Fig. 1.

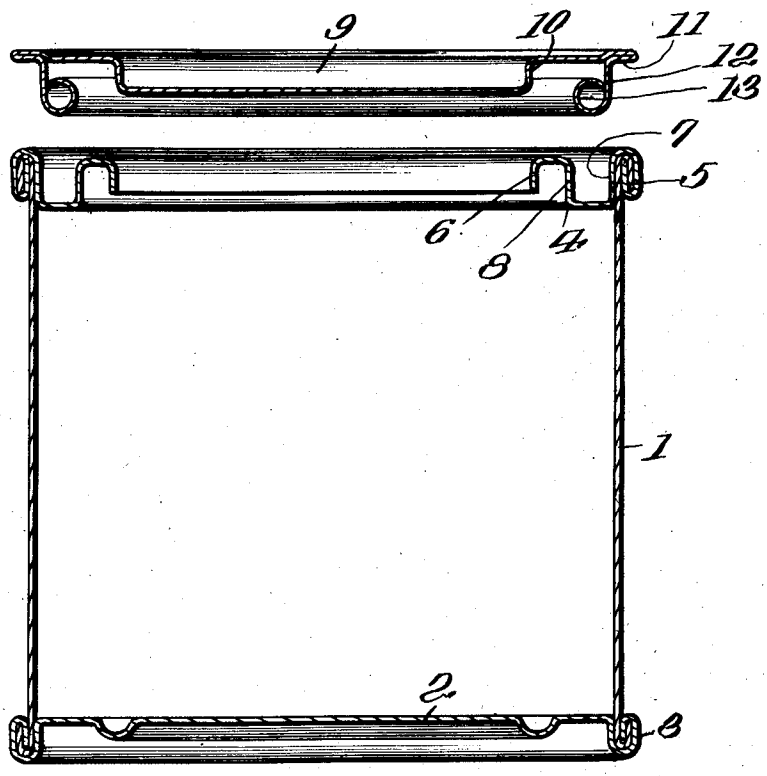
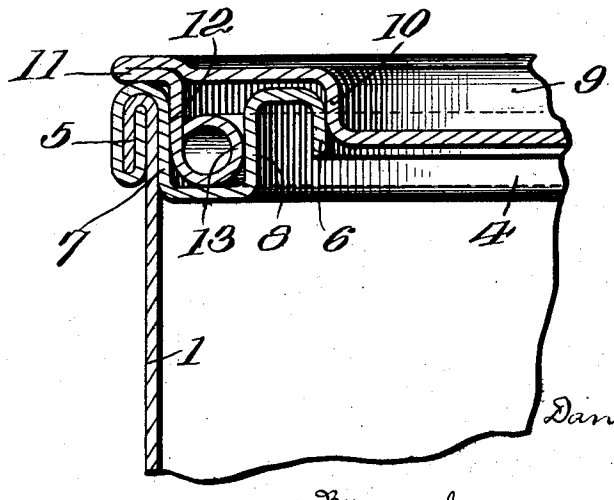


Fig. 2.



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UNITED STATES PATENT OFFICE.

DANIEL P. ROBINSON, OF BALTIMORE, MARYLAND, ASSIGNOR TO CONTINENTAL CAN COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

FRICTION TOP CAN.

Application filed April 26, 1921. Serial No. 464,583.

To all whom it may concern:

Be it known that I, DANIEL P. ROBINSON, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Friction Top Cans, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

The invention relates to new and useful improvements in sheet metal cans, and more especially to what is known in the trade as a friction top can.

In the patent granted John C. Taliaferro, February 9, 1915, No. 1,128,076, there is shown and described a friction top can wherein the cover is secured to the can by three pairs of independent cooperating frictional walls.

The present invention is particularly directed to a type of frictional top can such as shown in this patent, and has for its object to provide a construction wherein one pair of the frictional walls is brought into substantial alinement with the side wall of the can body, and the other pairs of frictional walls are brought correspondingly close to the side wall of the can body so that the pressure incident to the seating of the cover comes more nearly over the side wall of the can body.

A further object of the invention is to provide a friction top can of the above type wherein the central opening through which the contents of the can is removed or inserted is relatively large.

A still further object of the invention is to provide a construction wherein the two outer frictional walls on the cover may be bodily moved toward and from the center of the cover without changing materially the shaping or construction of the friction walls.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings which show by way of illustration one embodiment of the invention—

Figure 1 is a vertical sectional view through a can embodying my improvements with the cover removed and raised slightly from the can top in order to better illustrate the construction, and

Fig. 2 is an enlarged vertical sectional view through a portion of a can body embodying my improvements with the cover fully seated in a can top.

In carrying out the invention, I have provided a sheet metal can which is preferably cylindrical in cross section. Said can is is closed at one end by a can end which is preferably connected to the can body by a double seam. At the other end of the cylindrical can body there is a can top or end which is provided with a central opening and which is also double seamed to the can body. This can top is formed at the opening with a vertical frictional wall. It is also formed at the inner face of the wall of the can body with a frictional wall which is in contact with the inner wall of the can body and therefore substantially in alinement with the inner wall of the can body. Between the vertical wall at the central opening and the wall which is substantially in line with the wall of the can body, there is a third vertical wall. The cover has a central depressed portion forming a friction wall which cooperates with the friction wall at the opening in the can top. The cover also has a depending flange which is rolled to form friction walls cooperating respectively, with the other two friction walls in the top.

Referring more in detail to the drawings, my improved friction top can consists of a cylindrical can body 1 to which is secured a can end 2, said can end being connected to the can body 1 by a double seam 3. At the upper end of the cylindrical can body 1 there is a can top 4 which is secured to the vertical wall of the can body 1 by a double seam 5.

Said can body 4 is provided with a central opening and at the opening, said can top has a depending vertical flange 6 which formed one of the friction walls for securing the cover. Said can cover is also provided with a depressed portion adjacent the inner wall of the can body 1 which forms a vertical portion 7, the outer wall of which contacts with the inner wall of the body portion 1 of the can. Intermediate the vertical portion 7 and the vertical portion 6 is a vertical portion 8. The outer wall of the vertical portion 8 and the inner wall of the vertical portion 7 form friction surfaces for engaging the cover. The cover is indicated at 9 in the drawings, and said cover is formed with a central depressed portion

which provides a vertical portion 10, the outer wall of which is adapted to engage frictionally the inner wall of the portion 6. These two walls form one pair of friction walls for securing the cover to the can top. Said cover is in diameter substantially equal to the extreme outer diameter of the can. This cover is bent inwardly at 11 and thence downwardly to form the vertical portion 12. Said vertical portion 12 is rolled as indicated at 13 to form a portion which is circular in cross section. The inner portion of the roll 13 makes contact with the outer wall of the vertical portion 8 and this makes a second pair of friction walls for holding the cover on the can top. The outer face of the roll 13 and the outer face of the vertical portion 12 make frictional contact with the inner face of the vertical portion 7, and this forms a third pair of friction contact surfaces for holding the cover on the can body.

It will be noted that this third pair of friction contact surfaces is substantially in alinement with the vertical wall 1 of the can body. The other pairs of friction contact walls are equally moved outwardly from the center of the can and brought nearer to a position which is in alinement with the vertical wall 1 of the can body. This enables the pressure which is required in seating the cover to be more nearly over the vertical wall of the can body than in the prior Taliaferro patent referred to above and this greatly facilitates the seating of the cover in the can body. By the moving of the vertical frictional walls outwardly as far as possible, I am able to increase the diameter of the central opening through which the contents of the can is removed.

Again, it will be noted that the roll 13 which carries two of the friction walls for the cover is mounted at the lower end of a depending vertical flange, and this roll may bodily shift toward the center of the can or outwardly from the center so as to bring the friction walls thereof into contact with the friction walls of the vertical portions 7 and 8 without changing or distorting in any way the friction walls on the cover. This enables the cover to more readily adapt itself to any inaccuracies in the forming of the friction walls on the can top, and all three walls on the cover will readily aline themselves and make frictional engagement with the three friction walls on the can top.

Attention is called to the fact that the portion 10 on the cover engages the portion 6 on the can top after the roll 13 has engaged the two friction walls on the can top and the outward pressure of the cover on the vertical portion 6 will cause the friction walls 7 and 8 to more tightly grip the outer and inner portions of the roll 13.

It is obvious that minor changes in the details of construction may be made without departing from the spirit of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A friction top can consisting of a body portion, a top secured thereto, and a cover adapted to frictionally engage said top portion, said cover having a central depressed portion forming a substantially vertical frictional wall, and an outer depending portion rolled at its lower edge so as to form two separate spaced friction walls, said can top having an annular depression therein adjacent the vertical wall of the can body thus forming inner and outer substantially vertical frictional walls adapted to engage the friction walls formed by rolling of the depending portion, the outer friction wall on the top being substantially in alinement with the vertical wall of the can body, said top at its inner edge being curved downwardly to form a friction wall adapted to cooperate with the friction wall formed by the central depression in the cover.

2. A friction top can comprising a body portion, a top secured thereto and a cover, said cover having a central depressed portion forming a substantially vertical friction wall, said cover at its outer edge overlying the wall of the can body and being bent inwardly and thence downwardly substantially vertically, and bent at its lower edge to form a roll, thus forming two separate frictional walls, said can top having an opening centrally thereof with the outer edge bent downwardly to form a friction wall adapted to cooperate with the friction wall on the depressed portion of the cover, said can top having a depression therein adjacent the wall of the can body and forming a friction wall substantially in alinement with the vertical wall of the can body adapted to engage the outer friction wall on the depending portion of the cover, said depression also forming a substantially vertical friction wall adapted to cooperate with the friction wall at the inner face of the roll on the cover.

In testimony whereof, I affix my signature.

DANIEL P. ROBINSON.